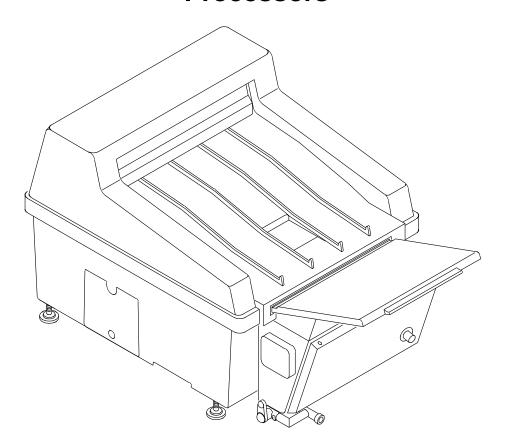
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# Site Specifications for the KODAK X-OMAT 1000, 1000A, and 1000J Processors



H164\_0007HC



#### **PLEASE NOTE**

The information contained herein is based on the experience and knowledge relating to the subject matter gained by Eastman Kodak Company prior to publication.

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This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.



#### Caution

This equipment generates, uses, and can radiate radio-frequency energy. If the equipment is not installed and used according to the instructions, it may cause interference to radio communications. The equipment has been tested and found to comply with the limits for a *Class A* computing device pursuant to Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at the user's own expense will be required to take whatever measures may be required to correct the interference.

This digital apparatus does not exceed the *Class A* limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

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# **Section 1: Introduction**



### Warning

- Keep the floors around your KODAK X-OMAT Processor and drains clean and dry at all times.
- Remove any collection of fluids immediately.
- If an overflow, or other malfunction of the drain for your processor occurs, call a plumber or other contractor to correct the problem.
- Kodak accepts no responsibility or liability whatsoever for the serviceability of any drain connected to or associated with a KODAK X-OMAT Processor. Such drains are the sole responsibility of the customer.

#### Certification

The fol	lowing Agencies have reviewed the Processor	The Processor meets the following EMI limits		
UL	listed to Standard No. 122	FCC Part 15, Class A Limits		
CUL	certified to Standard C22.2, No. 950-M89	C108.8-M1983 of Canada, Class A Limits		
FDA	FDA 21 CFR 820.30	Directive 87/308/EEC and EN 5502 of the ECC		
CE	licensed to EN60601-1 and EN60601-1-1	EN60601-1-2		
IEC	IEC 601	IEC1000-4-2, -3, -4, -5		
		EN55011		
		ICES-003		
		VCCI Class 1		
		AS/NZS 2064-1/2		

#### Checklist

Section	Topic	Reference Page	Completed
Equipment	Processor	<u>5</u>	V
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Site	Access	<u>Z</u>	
Specifications	Lighting	<u>Z</u>	
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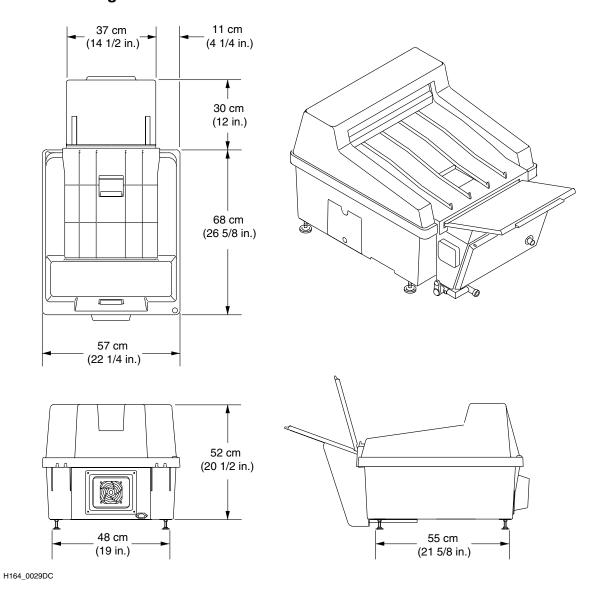
# **Section 2: Equipment Specifications**

## **Packed**

Specifications of the Shipping Crate and Processor				
Package Dimensions Weight				
1 of 2	92 x 69 x 65 cm (36 x 27 x 23 in.)	38.5 kg (85 lb)		
2 of 2	84 x 69 x 41 cm (33 x 27 x 16 in.)	27.2 kg (60 lb)		

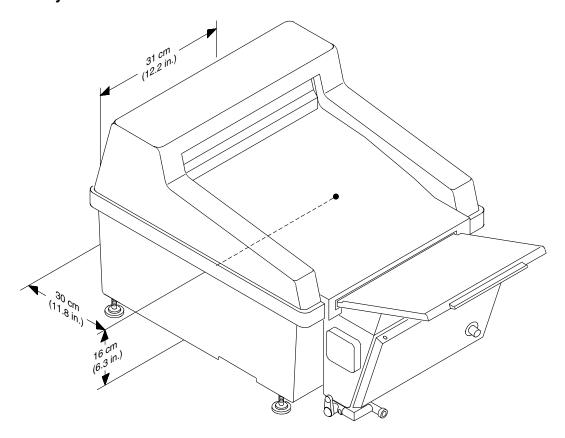
# **Unpacked**

### **Dimension and Weight**



Weight of the Processor				
With Solution Without Solution				
62 kg (136.7 lb)	51 kg (112.4 lb)			

### **Center of Gravity**



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### **Leveling Feet**

Leveling feet are provided on the processor.

#### **Processor Stand**

Use a rigid stand that can support a minimum of 125 kg (275 lb).

### **Seismic Mounting Kit**



#### **Important**

Observe all the local codes.

For maximum stability, use the KODAK Seismic Kit, 261413, to:

- Fasten the processor's leveling feet to a stand.
- Level the stand and fasten it to the floor.

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# **Section 3: Site Specifications**

### **Operating and Service Space Requirements**



#### **Important**

If these access requirements are not provided, service time and cost may increase.

Description	Recommended Minimum Distances
Drive side of processor	91 cm (36 in.)
Nondrive side of processor	91 cm (36 in.)
Dryer end of processor	91 cm (36 in.)
Feed end of processor	91 cm (36 in.)
Above the processor	91 cm (36 in.)
From any patient	1.5 m (5 ft)

### **Ambient Lighting**

Room lighting should not exceed 450 lux (150 ft-candles) at the processor. The room must be capable of becoming completely dark when loading film into the processor.

### **Noise Emission Information**

Operator position full system operating mode		
Sound Pressure Level	54 dB(A)Laa	
Instantaneous Peak Values > or = 130dB(C)	None	
Sound Power Level 65 dB(A)b		

- a. Measured in accordance with DIN 45635 in a Hemi-Anechoic chamber
- b. Not required when the Sound Pressure Level LA is < 85 dB(A)

### **Plumbing**

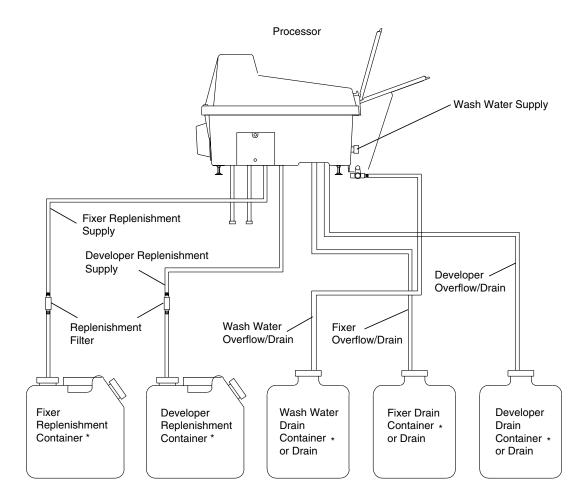
### **Specifications**

Subject	Requirements
Codes	Warning All plumbing requirements must comply with local and national codes. Iron piping is not recommended.

Subject	Requirements			
Drain or Drain Containers	Warning All material for the material. Use PV0		nd drain containers must be made of chemically resistant, non-corrosive equivalent.	
	The drain must ha	ave a min	imum diameter of 7.6 cm (3 in.) and no obstructions.	
	Minimum diamete	r	7.6 cm (3 in.)	
	Capacity		1 L/min (½ gal/min) during normal operation 2.85 L/min (¾ gal/min) for draining all 3 solutions together 0.95 L/min (¼ gal/min) if each solution is drained separately	
	Distance from the processor		1.5 m (60 in.) maximum	
	Height from the floor		Top of the drain or drain containers must be lower than the bottom of the processor.	
	Hoses	Drain and overflow hoses are packed with the processor. See Page 9.		
	Drain	Do not make solid connections between the hoses and the drain or containers. Use corrosive resistant connections.		
Water Supply	Location	Accessible to both the processor and the replenishment tanks		
	Input to the Processor		19 mm ( $^3\!\!/_4$ in.) NPT male connection on the nondrive side of the processor. adapt to a garden hose type fitting order Part No. 551400.	
	Temperature	<ul> <li>4 - 30°C (40 - 85°F)</li> <li>If the temperature of the water supply is higher than 30°C (85°F), instawater chiller.</li> </ul>		
		<ul> <li>A tempered water supply is suggested for cleaning the processor, and for mixing chemicals manually.</li> </ul>		
	Pressure	140 - 620 kPa (20 - 90 psi) If necessary, install a pressure regulator and gauge.		
	Flow volume	Maximum 1.25 L/min (1/3 gal/min)		
	Filtration	50-micr	on water filter is recommended in the input water line	
	Check Valve or Vacuum Breaker	The processor has an internal 20 mm (0.8 in.) water gap in the wash supp system. A check valve should not be necessary, unless local codes require one.		
Altitude	Maximum altitude	2400 m	(8000 ft) above sea level	

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### **Plumbing and Drain Connections**



\* Containers not Supplied

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#### Parts supplied with the Processor

Part No.	Description	Quantity
1E2035	Replenishment Filter	2

#### **Description of the Hoses**

Function		Color	O.D.	I.D.	<b>Length</b> <sup>a</sup>
Wash Water	Supply	Customer supplies hose/fitting to connect to 25mm (1 in.) NPT male fitti			
	Drain	Clear/White Band	16 mm (5/8 in.)	10 mm (3/8 in.)	70 cm (27 in.)
	Overflow	Clear/White Band	22 mm ( <sup>7</sup> / <sub>8</sub> in.)	16 mm (5/8 in.)	70 cm (27 in.)
Developer	Supply	Clear/Red Band	13 mm (½ in.)	6 mm (½ in.)	130 cm (51 in.)b
Replenishment	Drain	Clear/Red Band	16 mm (5/8 in.)	10 mm (3/8 in.)	70 cm (27 in.)
	Overflow	Clear/Red Band	16 mm (5/8 in.)	10 mm (3/8 in.)	70 cm (27 in.)
Fixer	Supply	Clear/Blue Band	13 mm (½ in.)	6 mm (½ in.)	130 cm (51 in.)
Replenishment	Drain	Clear/Blue Band	16 mm (5/8 in.)	10 mm (3/8 in.)	70 cm (27 in.)
	Overflow	Clear/Blue Band	16 mm (5/8 in.)	10 mm (3/8 in.)	70 cm (27 in.)

- a. Usable length of hose outside of the processor
- b. Including the replenishment filter and extension tube

### Parts available from Service Parts Management

Part No.	Description	Quantity	How to obtain the part
760476	6 mm (1/4 in.) ID Hoses for the Replenishment System	Order by	Obtain these parts locally or order
452990	10 mm (% in.) ID Hoses for the Drains and Overflows	the foot.	them from Kodak.
696442	16 mm (5% in.) ID Hose for the Water Drain		
1E2032	External Replenishment Tank	2	
1E2033	Pitcher	1	

## **Electrical**

Subject	Requirements					
Basic Service	Warning Earth ground is required. All electrical service must comply with local and national codes.					
Model	Voltage	Voltage Range	Watts	Hertz	Amps	Service
1000J	100	90 - 110	1200	50/60	12	3 wires:
1000A	120	104 - 132	1300	50/60	12	(Line 1, Neutral, Ground)
1000	220	198 - 242	1600	50/60	7	3 wires:
	230	207 - 253	1600	50/60	7	(Line 1, Line 2, Ground)
	240	209 - 264	1600	50/60	7	

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### Heating, Ventilation, and Air Conditioning

### **Specifications**



#### **Important**

- If the darkroom has 10 room air exchanges per hour, no further ventilation of the processor is necessary.
- If the darkroom does not have 10 room air exchanges per hour, the processor must be connected to the building exhaust system for correct venting. See specifications below.

Subject	Requirements				
Room	Temperature	15 - 30°C (	15 - 30°C (59 - 86°F)		
	Relative Humidity	15 - 76%			
	Ventilation	10 room air	r exchanges/hr for a room that is 3 x 3 x 3 m (10 x 10 x 10 ft)		
	Heat Load to the Room with the Processor		4800 kJ/hr (4500 BTU/hr)		

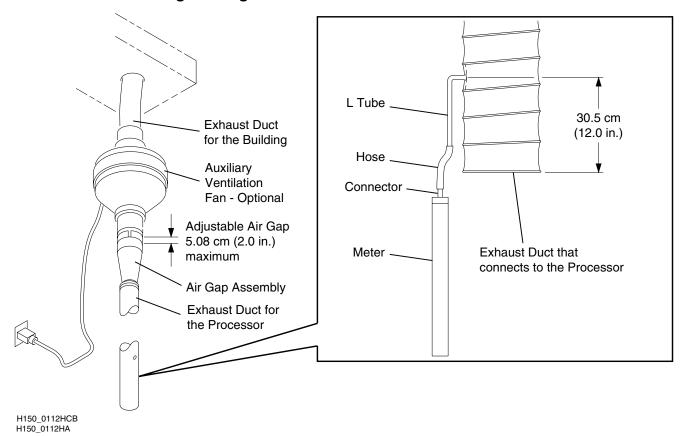


#### Important

- Check local codes for venting requirements.
- If the venting is not correct, fumes will corrode the equipment. <u>Do not install</u> the processor or accessories if the venting is not correct.
- If ventilation is to be connected to the processor, measure the negative static pressure in the exhaust duct by using the following procedure to check that the airflow is correct.
- The airflow is correct when the fumes are flowing out of the processor through the exhaust hose.
- Inform the customer that all covers and panels must be installed while the processor is energized.

Subject	Requirements				
Building Exhaust	The system must have the following ratings:				
System	Volume - full load	2,100 L/min (75 ft <sup>3</sup> /min) maximum, 24 hours per day			
	Temperature	66°C (150°F) maximum			
	Exhaust Duct from the Processor	Diameter = 7.6 cm (3 in.)			
	Exhaust Duct from the Building with an Adjustable Air Gap	Negative Pressure*			
		7.6 cm (3 in.) Duct	0.76 - 2.54 mm (0.03 - 0.10 in.) of water		
		10.2 cm (4 in.) Duct	0.25 - 1.02 mm (0.01 - 0.04 in.) of water		
		*See the next page for the procedure for checking the negative pressure. If the negative pressure is not correct, an auxiliary ventilation fan must be installed.			

#### **Procedure for Checking the Negative Pressure**



Diameter of the DUCT	Negative Pressure		
7.6 cm (3.0 in.)	0.76 - 2.54 mm (0.03 - 0.10 in.) of water		
10.2 cm (4.0 in.)	0.25 - 1.02 mm (0.01 - 0.04 in.) of water		

- [1] Connect the rubber hose from the Air Meter TL-2431 to the:
  - L Tube
  - · center connector on the meter
- [2] Make a 6.4 mm ( $\frac{1}{4}$  in.) hole approximately 30.5 cm (12 in.) from the end of the exhaust duct that will be connected to the processor.
- [3] Insert the L tube into the hole you just made until the end of the tube is flush with the inside of the exhaust duct.
- [4] Check that the negative pressure on the meter is correct.
  - Do not connect the exhaust duct to the processor.
  - · Hold the meter vertically.
- [5] If necessary, adjust the distance between the exhaust duct for the building and the exhaust duct for the processor until the negative pressure is correct. If you cannot obtain the correct negative pressure, an auxiliary ventilation fan must be installed.
- [6] Remove the L tube from the exhaust duct and seal the remaining hole.

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#### **Parts**

The KODAK Auxiliary Ventilation Fan Kit is available for use with all KODAK X-OMAT Processors to aid in meeting site specifications for ventilation. Improperly vented processors may exhibit film artifacts and corrosion of internal metal parts and accessories. Install this Auxiliary Ventilation Fan Kit if ventilation is inadequate or marginal.

Part No.	Description	Quantity	How to obtain the part
264503	KODAK Auxiliary Ventilation Fan Kit / 110 V, includes: Air Gap	1	Order these parts from
	Assembly 264519		Kodak or obtain
8B7105	KODAK Auxiliary Ventilation Fan Kit 95-250 V AC, 47-63 Hz,	1	equivalent parts locally.
	includes: Air Gap Assembly 264519		
264519	Air Gap Assembly	1	

# **Appendix A**

#### **Related Publications**

This publication is part of a series of instruction books that provides technical support information on the KODAK X-OMAT 1000, 1000A, and 1000J Processors. If you need an additional or replacement publication, order it through your Eastman Kodak Representative using the Publication Part Numbers below.

	Publications for KODAK X-OMAT 1000, 1000A, and 1000J Processors					
	Operator Manual	Site Specs	Installation Instructions	Service Manual	Diagrams	
Publication Part No.	9B8942	7C7880	9B8948	9B8949	7C7875	

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					1000A with serial no. 1243 and above

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